The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows.

-1-

A method of conducting human growth hormone therapy comprising:

administering a first compound consisting of one of human growth hormone, human growth hormone analogs, human growth hormone mimics, human growth hormone metabolites or fragments, human growth hormone releasers and mixtures thereof in combination with a second compound consisting of one of DHEA, DHEA precursors, DHEA releasers, DHEA analogs, DHEA metabolites, DHEA mimics, and combinations thereof.

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The method of claim 1 wherein said first compound is administered in doses sufficient to yield levels of somatomedin C (IGF-1) that approximate those found in individuals between about 10 and 30 years of age, and said second compound is administered at doses sufficient to maintain serum insulin levels at about the levels found in normal, healthy patients.

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The method of claim 1 in which said second compound is administered in doses sufficient to maintain the serum insulin level at about the basal level existing prior to administration of said first compound.

-4-

The method of claim 1 in which said first compound is administered at a dose level equivalent to .01 to .05 milligrams of growth hormone per kilogram of body weight per day.

-5-

The method of claim 4 in which said second compound is administered at doses equivalent to 50 to 1500 mg DHEA/day.

-6-

The method of claim 4 in which said second compound is administered in doses sufficient to produce circulating blood levels in the range of 200-2000 ng/dl for DHEA or 100-2000 μg/dl of DHEA-sulfate.

-7-

The method of claim 1 in which said first and second compounds are administered at a frequency of approximately daily to three times per week.

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The method of claim 7 wherein said first compound is administered in doses to yield the equivalent of integrated 24-hour or peak growth hormone levels that approximate those found in individuals between about 10 and 30 years of age, and said second compound is administered at doses sufficient to maintain serum insulin levels at about the levels found in normal, healthy patients; and

said second compound is administered in doses sufficient to maintain the serum insulin level at about the basal level existing prior to administration of said first compound.

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The method of claim 8 in which said treatment is continued for from about 1 to about 3 months.

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The method of claim 1 in which the amount of said second compound which is administered is varied in accordance with the level of serum insulin, the dosage being increased or decreased as necessary to maintain the level of serum insulin at approximately those levels found in normal, healthy patients.

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The method of claim 10 wherein said first compound is administered in doses to yield levels of growth hormone that approximate those found in individuals between about

20 and 30 years of age, and said second compound is administered at doses sufficient to maintain serum insulin levels at about the levels found in normal, healthy patients.

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The method of claim 11 in which said HGH releaser(s) is/are selected from the group consisting of arginine, L-dopa, clonidine, phenylalanine, growth hormone releasing hormone, ornithine, deprenyl, somatostatin inhibitors, and mixtures thereof.

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The method of claim 12 in which includes the use of secondary drugs which block undesirable side effects caused by administration of said second compound or of said first compound.

-14-

The method of claim 1 in which includes the use of secondary drugs which block undesirable side effects caused by administration of said second compound or of said first compound.

-15-

A method for regenerating a patient's involuted thymus comprising:

administering a first compound selected from the group consisting of human growth hormone, human growth hormone analogs, human growth hormone precursors, human growth hormone metabolites and human growth hormone releasers or mimics and mixtures thereof, combined with the approximately simultaneous administration of a second compound selected from the group consisting of DHEA, DHEA precursors, DHEA analogs, DHEA metabolites, DHEA releasers, DHEA mimics, and combinations thereof.

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A method for transplanting organs and grafting tissue into a patient comprising:

restoring immune system function by regenerating the patient's involuted

thymus;

injecting the immunological equivalent of the tissue or organ to be transplanted into the patient, into the regenerated thymus (or, in the case of bone marrow cells, peripherally); and

then transplanting said organ or grafting said tissue.

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The method of claim 16 in which said patient is given a dose of immunosuppressant at approximately the same time the intrathymic injection is administered.

-18-

The method of claim 17 in which the desired tissue or organ transplant is performed on the same day as the intrathymic injection, accompanied by maintenance of immunosuppression until tolerance is achieved.

-19-

The method of claim 17 in which transplantation of the desired organ or tissue is delayed until organ or tissue tolerance has been achieved, e.g., for approximately 1-2 weeks, or longer.

-20-

The method of claim 16 in which said step of regenerating said patient's thymus is performed by administering a first compound consisting of one of human growth hormone, human growth hormone analogs, human growth hormone precursors, human growth hormone metabolites, human growth hormone releasers, human growth hormone mimics, and mixtures thereof in combination with a second compound consisting of one of DHEA, DHEA precursors, DHEA releasers, DHEA analogs, DHEA metabolites and combinations thereof.

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The method of claim 16 in which said step of regenerating said patient's

thymus is performed by: administering a first compound selected from the group consisting of human growth hormone, human growth hormone analogs, human growth hormone precursors, human growth hormone metabolites and human growth hormone releasers or mimics and mixtures thereof, combined with the approximately simultaneous administration of a second compound selected from the group consisting of chromium picolinate and equivalent chromium containing compounds and phenformin.

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The method of claim 16 in which said step of regenerating said patient's thymus includes: administering zinc, Vitamin E and coenzyme Q_{10}.

-23-

The method of claim 22 in which said zinc is administered at 30-130 mg/60 kg body weight per day; Vitamin E is administered at 200-1000 IU/day/60 kg of body weight; and coenzyme Q_{10} is administered at 10-200 mg/day.

-24-

A method for treating autoimmune diseases comprising:

regenerating the patient's involuted thymus; and

injecting endogenous material into the patient's thymus, the endogenous material representing the target of the autoimmune attack.

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The method of claim 24 in which said endogenous material comprises pancreatic islets, whereby autoimmune diabetes can be cured.

-26-

The method of claim 24 in which said endogenous material comprises myelin, cartilage, renal tissue or skin, whereby multiple sclerosis, arthritis, lupus erythematosus, and scleroderma can be cured.

-27-

A pharmaceutical composition comprising:

a first compound selected from the group consisting of human growth hormone, human growth hormone analogs, human growth hormone precursors, human growth hormone metabolites, human growth hormone releasers, human growth hormone mimics, and mixtures thereof; and

a second compound selected from the group consisting of DHEA, DHEA precursors, DHEA analogs, DHEA metabolites, DHEA releasers and combinations thereof.

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The pharmaceutical composition of claim 27 which also includes one or more additional compounds which suppress undesirable side effects of said second compound or of said first compound.

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A method for regenerating a patient's involuted thymus comprising:

administering a first compound selected from the group consisting of human growth hormone, human growth hormone analogs, human growth hormone precursors, human growth hormone metabolites and human growth hormone releasers and mixtures thereof, combined with the approximately simultaneous administration of a second compound selected from the group consisting of phenformin, chromium picolinate and equivalent chromium containing compounds.

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A method for regenerating a patient's involuted thymus comprising:

administering zinc, Vitamin E and coenzyme Q_{10}.

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The method of claim 29 in which said zinc is administered at 30-130 mg/60 kg body weight per day; Vitamin E is administered at 200-1000 IU/day/60 kg of body weight;

and coenzyme Q_{10} is administered at 10-200 mg/day.